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Introduction

The image of a child's drawing of his or her family would be familiar to many, perhaps displayed on the kitchen fridge with a magnet or kept as a treasured item by the child's parent or loved one. Children draw frequently both in school and at home, depicting a vast range of scenes, including what they see in their surrounding environment. Because children's drawings are so easy to procure and can be found in a variety of contexts and cultures, they have been validated as a helpful assessment tool in a number of psychological studies involving attachment theory.

The field of developmental psychology has studied attachment theory extensively over the past several decades. Attachment is defined as the quality of the bond between an individual and an attachment figure, typically a child and parent or other caregiver. The nature and quality of this bond in childhood is important to the individual's wellbeing, and has been linked over the years with different parenting behaviors, a variety of externalizing and internalizing behaviors in children, their school performance, and their attachment behaviors later in life. In light of this, the current study examines what children's drawings of their families can tell us about the bond existing between them and their mothers. How could the behaviors of the mother influence the child's drawing of the family? Could a family drawing help researchers and clinicians gain more understanding and meet the needs of children who are developing typically, as well as those who may require more intervention and support? What are the potential moderators of these attachment security representations?

This thesis will focus on the study of attachment theory within the field of developmental psychology in the hopes of expanding upon this body of knowledge and how it attempts to

answer these questions. Attachment literature primarily examines the bond between a child and an attachment figure. Historically, the mother-child bond has been studied the most extensively, and the literature outlined here and the current study center on this highly influential relationship. This thesis will begin by discussing attachment theory and its origins, and how attachment is typically assessed and measured in early to middle childhood. Next, it will highlight the use of family drawings as a measure of attachment representations in childhood, and its role in the current study. The importance of attachment classifications in early and middle childhood are examined, followed by maternal behaviors that have been linked with different attachment styles. Lastly, this thesis will examine the role of child age and gender as potential moderators of school-aged child attachment representations.

Attachment researchers have found the assessment of attachment relationships after early childhood, starting around ages three and four, to be a matter of some difficulty. Assessments created for infants and early childhood, such as Ainsworth's Strange Situation, are no longer developmentally appropriate for school-aged children, yet direct verbal interviews may still be unsuccessful as a measurement tool. Assessments for this age range have emerged, such as the Child Attachment Interview (Target, Fonagy, & Schmueli-Goetz, 2003), the School-Aged Assessment of Attachment (Crittenden 2015), the MacArthur Story Stem Battery (Schechter et al., 2007; Grych, Wachsmuth-Schlaefer, & Klockow, 2002), and family drawings (Fury, Carlson, & Sroufe, 1997). These assessments utilize children's narrative abilities in order to access their attachment security representations.

The History of Attachment Theory and its Measurement

Attachment Theory

Attachment theory was initially developed by clinical psychologist John Bowlby in the 1950s to understand the reason for the strong tie between mother and child. Drawing on his clinical observations of children's reactions to separation from their mothers, Bowlby took an ethological approach to studying this relationship (Bowlby, 1988). He wrote extensively about this theory, which was groundbreaking and highly critiqued in a period where Freudian psychoanalysis reigned within the field of psychology (Bowlby, 1988). Bowlby's colleague, Mary Ainsworth, pioneered the empirical study of attachment theory with her Strange Situation Procedure, which is still considered the gold standard for assessing attachment classifications in infancy (Cassidy, 2016).

Attachment broadly defined is the quality, not strength, of the relationship between a child and an attachment figure, which is typically a parent or a caregiver. In the current study, the mother is the primary attachment figure of interest. Attachment can be considered to be a biological drive for proximity to the attachment figure, and has been observed in multiple species. It is hypothesized that this drive increases survival rates, which provides an evolutionary basis for this cross-species adaptation. The attachment system functions particularly in times of threat or distress, namely, separation from the caregiver (Cassidy, 2016).

The desire for proximity to an attachment figure drives attachment behaviors, and the literature suggests that this desire is not a secondary motivator for some other primary survival goal such as food or shelter, but is itself a primary motivator. The idea that attachment is itself a primary goal is illustrated in part by the fact that attachment behaviors have been found to exist in situations of abuse and neglect. Proximity to an attachment figure, or bond between them and the child, is somehow intrinsically rewarding. However, context and circumstances determine

which attachment behaviors develop, as proximity-seeking behaviors take many forms. Attachment behaviors lead to predictable outcomes and survival goals. The behaviors used to achieve these goals change over the course of development. (Cassidy, 2016).

Bowlby outlined three main categories or styles of attachment in his writings. Attachment styles are individual-specific, meaning that a child could have different attachment relationships with the mother and father (Cassidy, 2016). Secure attachment indicates that the child perceives the attachment figure as a safe, secure base from which they can venture forth to explore their environment. In secure attachment, more exploration away from the attachment figure is seen in the child (Bowlby, 1988). In times of distress, the child seeks the attachment figure as a source of support (Bowlby, 1988; Cassidy, 2016).

In an insecure-resistant attachment style, the child is unsure of the response that they will receive from the attachment figure in times of distress or when proximity is sought. Attachment theorists postulate that this results from mixed behavior of both comfort and rejection on the part of the attachment figure, and is exhibited by clingy behavior on the part of the child (Bowlby, 1988; Cassidy, 2016). Insecure-avoidant attachment has been described as the child's utter disbelief in the ability of the parent to comfort (Cassidy, 2016). Attachment theory postulates that this results in the child attempting to be entirely self-sufficient and independent, due to experiencing repeated rejections from the attachment figure (Cassidy, 2016).

Attachment classifications and the study of attachment-related experiences, feelings, and relationships in children are considered to be important throughout development. Moss, Rousseau, Parent, St-Laurent, & Saintonge (1998) stated that parents continue to serve as a secure base for children throughout childhood, and consequently, the parent-child attachment

relationship continues to influence children's internal working models regarding other social interactions, relationships, and events. Moreover, they found that school-aged children's attachment classifications were able to significantly predict children's teacher-reported behavior problems when transitioning to school, as well as two years afterward (Moss et al., 1998). School-aged children's attachment security representations, assessed by family drawings, have also been shown to be associated with concurrent measures of their social adjustment (Pianta, Longmaid, & Ferguson, 1999). Additionally, significant differences in children's family drawings have been found between those who have suffered abuse and maltreatment and those who have not (Shiakou, 2012). The evidence in attachment research suggests that these patterns and classifications matter for development beyond early childhood, and may have clinical value.

How Attachment is Measured

In early childhood, external attachment behaviors are the focus of attachment assessments, such as reunion episodes between mothers and their infants. Ainsworth, a colleague of John Bowlby's, developed an experimental measure of attachment style in infants and their mothers called the Strange Situation Procedure (SSP, Ainsworth & Bell, 1969). This is the most frequently used assessment of attachment in early childhood. Ainsworth and Bell (1969) defined attachment and the attachment system as the predisposition to proximity-seeking behaviors. The SSP tests Bowlby's theory, which he developed in part based on his clinical observations of mother-child separation and children's reactions to it. The SSP looks at how the infant reacts to novel stimuli, in the form of a new environment, new toys, and the presence of a stranger. It also observes the infant's proximity-seeking behaviors displayed in reaction to separation from the mother. Most important to classifications resulting from the SSP are, however, the reunion

behaviors that the infant displays upon the mothers return, particularly interaction and contact-maintaining behaviors directed toward the mother (Ainsworth & Bell, 1969). This goes along with Ainsworth's theory on sensitive and responsive parenting's impact on attachment security, which has been heavily explored and supported in subsequent attachment research (Fearon & Belsky, 2016). Parenting behaviors and their relationship to attachment security will be explored further in the current study.

Since the SSP is principally intended for mothers with infants in their first few years of life, other measures of classifying attachment have been developed for older children. Measures for school-aged children have delved into children's internal mental representations of attachment relationships and experiences (Stadelman et al., 2007). These internal representations can be understood as children's perceptions of the social context around them (Stadelman et al., 2007). Attachment theory proposes that these internal models help structure how children will react in other social contexts and relationships (Stadelman et al., 2007; Pianta et al., 1999). The current study focuses on assessments of children's attachment relationships and experiences that elicit children's narratives in a variety of ways, in order to evaluate them for attachment-related content. A number of these methods of assessment have been validated for use in clinical and nonclinical samples, and have been associated with children's behavioral and emotional development.

The Adult Attachment Interview (AAI, George et al., 1985; Main, 1995), which is used in assessment research with adults, focuses on an individual's state-of-mind regarding their previous attachment experiences. The Child Attachment Interview (CAI, Target et al., 2003) assesses attachment in school-aged children using a set of verbal interviews derived in part from

the AAI. It emphasizes the importance of verbal and nonverbal information provided by children, and presumes school-aged children would be able to answer direct questions about their attachment experiences and relationships (Target et al., 2003). The authors determined that the CAI scales validly assesses a single construct, termed attachment, which could not be accounted for by other variables such as children's IQ, verbal skills, age, gender, or parental marital status (Target et al., 2003).

The School-Aged Assessment of Attachment, or SAA, implements children's storytelling abilities as a method of accessing their attachment behaviors (Crittenden, 2015). The SAA utilizes picture cards featuring various scenarios in order to prompt children to discuss their attachment behaviors in times of distress (Crittenden, 2015). Several studies found the SAA to be a valid and clinically useful measure that could discriminate between different attachment strategies, when examining children's narratives for their overall patterns (Crittenden, 2015; Crittenden, Kozlowska, & Landini, 2010). Crittenden (2015) noted that family drawings were another measure that could provide information that the words of children at this stage of development could not. Like the SAA, the validated family drawing coding procedure used in the current study looks for overall patterns in order to access children's subjective emotions and narratives about their attachment relationships.

The MacArthur Story-Stem Battery (MSSB, Bretherton, Oppenheim, Buchsbaum, & Emde, 1990) is another narrative assessment of child attachment, and incorporates doll play and storytelling in order to facilitate children's narrations of attachment-related concepts and experiences. This narrative method has been linked to Ainsworth's SSP classifications, and is thought to tap into children's natural inclination to storytelling (Grych et al., 2002). In a study of

mothers and children ages 4-7 examining the impact of the mother's exposure to violence, children were presented with several stories and told the beginning and then asked to finish out the narrative (Schechter, et al., 2007). These narratives were coded for their content, themes, coherence, and on how the children delivered them, with coders having excellent interrater reliability (Schechter et al., 2007). Features of the children's narrative patterns elicited by the MSSB were strongly correlated with maternal experiences of violence and history of PTSD (Schechter et al., 2007). Another study found differences between the narratives of children whose mothers had suffered spousal abuse and those who had not (Grych et al., 2002). The clinical utility of an attachment assessments like the MSSB is clear, given that it can provide access to young children's internal representations of critical events and relationships, how they conceptualize themselves in their own social context, and the subjective emotions they may feel about a given situation or relationship.

The assessments described above are some examples of narrative-focused attachment measures used during middle childhood. It is worth noting that these assessments require extensive training and labor to administer and subsequently code. Thus, the family drawing task addresses a need for a valid measure of children's attachment security representations that is easy to procure and to score.

Family Drawing Task and Attachment

The current study utilizes the Family Drawing Task, and a coding system developed by Fury et al. (1997). Family drawings have been used as a method of assessing attachment security representations in school-aged children, and have been linked to children's prior attachment classifications in Ainsworth's Strange Situation Procedure (Fihrer & McMahon, 2009).

Attachment theory postulates that family drawings can assess children's subjective mental representations of family relationships, structure, and processes that they have internalized from their experiences. Family drawings access children's internal working models of themselves, their families, and attachment-related experiences.

Family drawings are regarded as having clinical utility, having been linked to adjustment issues and behavioral problems in multiple studies. The fact that it is a largely non-verbal activity could potentially allow children to provide both conscious and unconscious representations of attachment relationships (Fury et al., 1997; Kloft, Hawes, Moul, Sultan, & Dadds, 2017). Children's family drawings coded using Fury et al.'s (1997) coding system have been significantly linked with school-aged children's social behavior and relationships (Pianta et al., 1999), and measures of maladaptive child-parent relationships also derived from family drawings (Leon, Wallace, & Rudy, 2007). Another study involving a modified version of the family drawing task found that less family dysfunction was depicted in family drawings after treatment for child conduct problems and parenting behaviors, when controlling for multiple correlates (Kloft et al., 2017).

The family drawing task can provide an avenue for researchers to ascertain children's own perceptions of various experiences and relationships without the bias of other reporters, such as parents or teachers. Roe, Bridges, Dunn, and O'Connor (2006) conducted a longitudinal examination of children's family drawings at ages 5 and 7 to determine the task's construct validity and relationship to children's actual family structures and adjustment difficulties. They found that when longitudinally examined, children's family drawings reflected their perceptions of their family's structure, rather than more impermanent aspects of these relationships, by

specifically focusing coding efforts on individuals the children elected to exclude from family drawings completed at two different time points (Roe et al., 2006). The contents of these drawings were also found to be associated with children's externalizing and internalizing behavioral issues, and were therefore suggested to have potential clinical utility (Roe et al., 2006). They determined that family drawings were a valid assessment of who children consider to be family members, and have predictive ability for children's adjustment (Roe et al., 2006).

Family drawings in the current study are not coded based on the child's skill level, which may differ with age and other factors. The coding system used in the current study (Fury et al., 1997) emphasizes the narrative provided by the child in conjunction with the drawing, typically a description of its content, based on the assumption that said content can give insight into the child's mental representations of, and emotions about, themselves and their families.

Fury, Carlson and Sroufe (1997) tested and modified a family drawing coding system developed by Kaplan and Main (1985). It is this coding system that is used to rate family drawings in the current study. Fury et al. (1997) employed a checklist, derived from Kaplan and Main, that detailed different signs visible in children's family drawings that could help classify each into an overarching attachment category of secure or insecure. They looked at whether or not these drawing signs were significantly and predictably related to children's early attachment history, assessed by the SSP around 1 year of age, in a longitudinal sample of high-risk mothers and children (Fury et al., 1997). First, these authors applied general attachment classifications of secure or insecure to the drawings in a sample of children whose early attachment classifications were available (Fury et al., 1997). They found that the Strange Situation Procedure could predict

a child's insecure family drawing even when controlling for third variables such as IQ, emotional functioning, and life stress (Fury et al., 1997).

Next, they honed the checklist of signs, editing certain items by applying them to different categories or clarifying the wording, while omitting signs they found too difficult to operationalize, i.e. "false smiles" (Fury et al., 1997). Their goal was to identify which signs were related to the major attachment classification groups (Fury et al., 1997). Lastly, to score the drawings using an integrative approach they found to be most predictive of attachment classification, Fury et al. (1997) developed a series of 7-point rating scales, emphasizing the context of the signs to be identified in the drawing as a whole.

Their results indicated that most individual signs in Kaplan and Main's (1985) coding system were not discriminatory of attachment classifications, and therefore over-reliance on these signs as predictive of attachment category was unwise (Fury et al., 1997). Integrative rating scales, made up of groupings of signs from the coding system, were found to be significantly predictive of attachment classification (Fury et al., 1997).

Fury et al. (1997) established that family drawings are capable of detecting the more subjective elements of attachment representational models in children ages 8-9. Fury et al. (1997) advocated for the use of family drawings to access aspects of children's subjective, internal representational attachment models of themselves in relationships. Particularly, these authors suggested that family drawings are useful in middle childhood when assessments such as the SSP are no longer appropriate, but direct interview assessment of children still may not be the most useful (1997). Fury et al. (1997) recommended an integrative use of the coding system developed by Kaplan and Main (1985) that they refined, emphasizing the importance of

examining the drawing as a whole rather than emphasizing the presence or absence of a single sign. Fury et al.'s (1997) rating scales are used in the current study.

A study by Fihrer and McMahon (2009) looked at maternal depression and state of mind regarding attachment as they related to the insecurity level of their child's family drawing. The results linked maternal depression with children's insecure drawings, and the mother's perspective on attachment to the attachment classification her child's drawing received (Fihrer & McMahon, 2009). Further, the authors stated that the association they found between certain maternal behaviors and family drawings suggested that family drawings can be used as a measure of children's attachment security representations, general family structure, and emotional environment (Fihrer & McMahon, 2009).

Family drawings can shed light on attachment-related experiences and relationships outside of the family in broader social environments. Pianta and colleagues (1999) also evaluated Kaplan and Main's family drawing coding system, in order to determine if the attachment classifications derived by this system were associated with concurrent measurements of children's social competence when controlling for correlates, such as fine motor skill and SES. Pianta et al. (1999) investigated the reliability and validity of family drawings in a non-clinical sample of kindergarten and first grade children. Because attachment security classification patterns had previously been observed in children using play or story-based methods of assessment, such as doll interview techniques, the authors determined there was an empirical basis for associating children's attachment behaviors with representations of themselves and their relationships, such as those depicted in family drawings (Pianta et al., 1999).

Several findings emerged from this study (Pianta et al., 1999). The authors noted that drawings able to receive reliable scores can be elicited from children as young as five or six years of age (Pianta et al., 1999). They obtained significant interrater agreement in terms of global classifications for the drawings, but cautioned that their results suggested reliability is highest when considering drawings from a more global perspective rather than over-emphasizing discrete drawing features (Pianta et al., 1999). Examining overall patterns, much like the approach from Fury et al. (1997), seemed to yield more consistent, meaningful results for these types of attachment-related assessments in children.

Pianta et al. (1999) found that the scores from the drawing coding system they used were significantly related to measures of their social adjustment, when accounting for correlates. Overall, Pianta et al. (1999) found support for the use of Kaplan and Main's attachment-based coding system for family drawings, and found them to be a valid assessment of attachment-related experiences and relationships, related to concurrent measures of social competence, that could have potential clinical use.

Procaccia, Veronese, and Castiglioni (2014) assessed the attachment representations of Italian school-aged children using family drawings. The authors desired to extend literature that linked family drawings and insecure attachment in children. They also worked with the scales developed by Fury, Carlson, and Sroufe (1997) and the coding system developed by Kaplan and Main (1985). Their results suggested that family drawings are a strong measure that can help access children's representations of attachment, and found that the drawings of children classified in different attachment groups were distinct (Procaccia et al., 2014).

Family drawings have been used in assessing various kinds of high-risk samples, and differences in them have been associated with parenting behaviors, as well as externalizing and internalizing behavior abnormalities on the part of the child (Shiakou, 2012; Kloft et al., 2017; Wagner, Willoughby, Mills-Koonce, Zvara, & Cox, 2015). Shiakou (2012) found that the family drawings of children who had endured abuse and maltreatment were significantly different from children who had not. The author highlighted the subjective nature of the family drawings, and that they should be used in conjunction with other measures. While they cannot be taken as indicators of abuse in and of themselves, Shiakou (2012) stated the family drawings can help indicate emotional distress at parts of child development where a verbal interview is not an appropriate measure.

Dallaire, Ciccone, and Wilson (2012) evaluated children's attachment representations and feelings of security within their families in light of their contact or lack of contact with an incarcerated parent. They found that increased visitation was not associated with increased insecurity in family drawings, but that more contact of all types was associated with higher levels of role reversal that were not found in the control group (Dallaire et al., 2012). Other results from this study suggested that higher parental stress was correlated with higher insecurity in the child's family drawing (Dallaire et al., 2012).

The current study examines children's family drawings to assess the impact of maternal parenting behaviors and other potential moderators such as child gender and age on their attachment security representations. Are parenting behaviors such as maternal harshness or involvement associated with particular drawing outcomes? Are there differences in drawing outcomes related to child age and gender?

Potential Moderators of Attachment

Maternal Behaviors

In his book *A Secure Base,* Bowlby (1988) discussed the main attachment classifications he developed and the maternal behaviors associated with each. He analyzed the possibile impact maternal depression could have on a young child, particularly emphasizing maternal behaviors such as threats of suicide or abandonment (Bowlby, 1988). Bowlby (1988) highlighted the need that he saw at the time for empirical research to discover more about the types of family structures, parenting behaviors, and home environments that could engender different attachment styles in children, seeing these variables as highly intertwined.

Ainsworth, who further researched Bowlby's theory, maintained that sensitive, responsive parenting was central to the development of secure attachment in early childhood (Fearon & Belsky, 2016). She defined sensitive parenting broadly, but it can be conceptualized as prompt and appropriate responsiveness to the child's distress, or a child's more general behavioral cues (Fearon & Belsky, 2016; Borelli, Vazquez, Rasmussen, Teachanarong, & Smiley, 2016). At this stage, the majority of the responsibility for ensuring secure attachment is the parents' (Fearon & Belsky, 2016). Behaviors that classify as sensitive or responsive on the part of the parent can differ from child to child (Fearon & Belsky, 2016). Environment has been found to be largely responsible for the variance in attachment classification, which strongly supports an important hypothesis of attachment theory (Fearon & Belsky, 2016).

Over the years, attachment literature has often focused on parenting behaviors and their relationship to attachment. De Wolff and van Ijzendoorn (1997) conducted a meta-analysis of the research done on parental antecedents of infant attachment, based on the theoretical work

pioneered by Bowlby. Their results suggested that sensitivity is not the only mechanism contributing to secure attachment relationships, and that other concepts such as positive attitude and emotional support should be considered as equally important in a multidimensional approach to attachment antecedents (De Wolff & van Ijzendoorn, 1997). Additionally, the impact of particular parental behaviors may differ between clinical and non-clinical samples, as maternal behavior may have less of an impact on infant attachment in high-risk samples (De Wolff & van Ijzendoorn, 1997).

A study found that children's attachment classifications could significantly predict behavior problems in school, but that maternal self-reported stress and mother-child interactive patterns partially mediated the relationship they reported between attachment classification and behavioral issues (Moss et al. 1998). Maternal behaviors, and additionally mother's own attachment experiences, can potentially influence their own children's attachment classifications. Fihrer and McMahon (2009) found a moderate, significant relationship between children's family drawings at ages six to eight and their instances of exposure to maternal depressive episodes in their longitudinal study. The mother's perspective on attachment as assessed by the AAI, and data collected from the SSP when the child was one year old, were significantly related to the child's family drawing in later childhood (Fihrer & McMahon, 2009).

A study examined parent dyads and their children to address whether or not parents' working mental models of their own childhood attachments were a risk factor for subsequent challenges in their relationships with their children (Cohn, Cowan, Cowan, & Pearson, 1992). They found that when both parents were classified as insecure by the AAI, the risk for their children is more noticable (Cohn et al., 1992). A longitudinal study looking at different parenting

styles and their relationship to mother-child attachment in middle childhood and adolescence (Karavasilis, Doyle, & Markiewicz, 2003). Their results indicated that parenting behaviors were significantly associated with secure child attachment across the two time points. Distinct patterns emerged between these parenting dimensions and secure attachment, as well as the different types of insecure attachment (Karavasilis et al., 2003). Parental warmth, involvement, and the encouragement of psychological independence were independently linked to secure attachment in both middle childhood and adolescence (Karavasilis et al., 2003).

The current study examines the relationship between maternal behaviors and child attachment security representations. Our focus was on maternal hostility, warmth and responsiveness, as well as the structure of the child's environment. We used both mother and child-reported measures for these maternal behaviors, in order to understand more clearly the child's perceptions of the mother's parenting styles.

Gender and Age

Findings have been mixed concerning gender differences in attachment assessment. Ainsworth's original study did not find gender differences in infants' performance on the SSP, and subsequently only a few studies using the SSP have observed them (Pierrehumbert et al., 2009; Lieberman, Doyle, & Markiewicz, 1999). These gender differences in infant attachment have been more observable in high-risk populations experiencing severe levels of stress (Pierrehumbert et al., 2009). Many studies of attachment in school-aged children do not report on gender or do not find it to be a significant moderator (Pierrehumbert et al., 2009).

However, some researchers expected gender differences in attachment as children age, due to a changing relationship with their parents, particularly finding fathers to be less

responsive to female children as they age (Lieberman et al., 1999). A study found that younger boys and older girls saw their father as less available, but that both boys and girls perceived their mothers as available regardless of age (Lieberman et al., 1999). Another found boys to be more secure in the relationships with their fathers than girls, and that girls were more secure in their relationships with their mothers than fathers (Diener, Isabella, & Behunin, 2008). Child perceptions of attachment security differed based on the gender of both the child and parent, but not child age (Diener et al., 2008). A potential explanation for this may be that children have more similar methods of interaction with their same-sex parent, which could affect attachment security (Diener et al., 2008).

Narrative assessments of attachment may expose more gender differences. Several methods of narrative assessments of attachment in children around preschool age have exhibited gender differences in the themes that children present and in their representations of relationships (Pierrehumbert et al., 2009). Boys' narratives have been found to be more negative than girls' in terms of their parental representations (Stadelman, 2007). Another study also found gender differences in boys and girls' narratives, specifically concerning attachment experiences, finding girls to be more secure and more likely to coherently express their emotions, while boys' narratives were more disorganized (Pierrehumbert et al., 2009). Boys and girls may react differently to distressing maternal behaviors that activate the attachment system, with boys adopting a more fight-or-flight response and girls using a tend-and-befriend approach that were observable in the attachment narratives they provided (Pierrehumbert et al., 2009). Narrative assessments themselves and the way they are coded, as continuous assessments accounting for

quality and coherence as well as content, may be more sensitive to gender differences than other kinds of assessments such as questionnaires (Pierrehumbert et al., 2009).

Some gender differences have been observed in attachment behaviors and their impact on peer relationships in young, school-aged children. In a small-scale study of four-year-olds, insecure boys were observed to have the most aggressive, noncompliant, and attention-seeking behaviors in peer interactions at school, while insecure girls did not differ from children classified as secure in the amount of positive behaviors they exhibited (Turner, 1991). Insecure boys frequently sought peer approval, but would interact too aggressively to receive it, which in turn would increase aggressive behaviors (Turner, 1991). Insecure girls displayed more passive, dependent, and compliant behaviors, as well as positive affect, and even received fewer negative peer responses than children classified as secure (Turner, 1991).

Due to these mixed results, the current study examines the effect of child gender and age on the relationship between maternal behaviors and family drawing outcomes. Family drawing coding includes the child's narration of the drawing and explanation of what he or she drew. Narrative and representational assessments of attachment may expose more gender differences in how children are socialized to express their perceptions and emotions, and therefore this study looked at the data separately for boys and girls while controlling for age.

The Current Study

This review of the literature leads us to several testable hypotheses. First, we explored the role of age and gender. We have no specific hypotheses about gender and age, but want to examine the relation between age and gender and children's attachment representations as assessed in family drawings.

Hypothesis A: higher scores on mother-reported items related to maternal hostility were hypothesized to be related to indicators of insecurity in family drawings when controlling for child age in years.

Hypothesis B: higher scores on mother-reported items related to maternal warmth and responsiveness were hypothesized to be associated with indicators of security in family drawings when controlling for child age in years.

Hypothesis C: child-reported maternal hostility was hypothesized to be correlated with more indicators of insecurity in family drawings, while controlling for child age in years.

Hypothesis D: child-reported indicators of maternal warmth and responsiveness were hypothesized to be associated with more indicators of security in family drawings, while controlling for child age in years.

Method

Participants

Descriptive data including participant demographic information can be found in Table 1. Participants included 119 mother-child dyads, 52.9% of children were male, between the ages of four and six (mean age=4.98 years, *sd*=.82). Several mothers had sibling pairs or trios participating in the study. Mothers ranged in age from twenty-two to fifty-one (mean age=36.58 years, *sd*=4.78). The majority of the mothers were White (86.4%), 1.7% were Black, 5.1% Asian, 1.7% Native American, and 5.1% marked Other. A total of 4.2% of the mothers in the study were Hispanic. Additionally, 40.7% of the mothers in the sample had a masters' degree, and 30.5% were college graduates. The majority of participating mothers (89.0%) were married. Most of the children in the sample were White (83.1%), 11.0% identified as Other Race/Ethnicity, 4.2% were Asian, 1.7% were Black, and 7.6% of the children were Hispanic.

Procedure

Participants were recruited from elementary schools in Williamsburg, VA and surrounding areas such as Norge and New Kent. Recruitment also took place around Williamsburg in churches, daycares, co-ops, bookstores, dental offices, restaurants, and more by flyering. Families were scheduled via email, phone, or text and could participate seven days a week from 9 AM to 6 PM. Exclusion criteria included diagnoses like ADHD and other developmental delays.

All mother and child participants were met in the Child and Family Studies Center at the College of William & Mary by two research assistants. Participants in the current study were a subset of those recruited for a larger experimental study examining mother-child communication. Mothers gave informed consent for self and child to participate, and children subsequently gave assent for self to participate. Mothers and children were interviewed separately. Mothers completed a questionnaire packet which included a demographic assessment and questions about her parenting behaviors (see Appendix A and B). It typically took mothers 15-30 minutes to complete the questionnaire portion.

Children, interviewed separately from their mother, were first asked to draw a picture of their family. Then they answered questions about their mood and their mother's behavior (see Appendix C). Because children were not restricted in the time given to draw, completion times ranged from 30-60 minutes. Upon completion of the study, mothers were compensated with a $15 gift card, and children with a $5 gift card, stickers, and a toy.

Measures

Parent Measures

Mothers filled out demographic information at the start of their questionnaire packet for both themselves and their child. Mothers with more than one child participating completed separate questionnaire packets for each child. This portion consisted of questions about the mothers' marital status, education level, and other questions about her child (e.g., an emotion regulation checklist).

To assess parenting behaviors, such as maternal discipline and harshness, mothers completed a modified version of the Alabama Parenting Questionnaire (APQ, Frick, 1991). The questionnaire was modified to eliminate items that were developmentally inappropriate for the child age range used in the current study, as the measure is designed for use with children ages six to eighteen. The full APQ is a 42-item measure examining parenting behaviors that have been associated in previous work with behavioral disorders in school-aged children (Clerkin, Marks, Policaro, & Halperin, 2007). It assesses five constructs: Positive Parenting (e.g.,"you let your child know when he/she is doing a good job with something"), Parental Involvement (e.g., "you have a friendly talk with your child"), Poor Monitoring/Supervision (e.g., "your child is at home without adult supervision"), Inconsistent Discipline (e.g., "you threaten to punish your child and then do not actually punish him/her"), Corporal Punishment (e.g., "you slap your child when he/she has done something wrong") and Other Discipline Practices (e.g., "you ignore your child when he/she is misbehaving"). The mother circled 1 through 5 (never to always) for each item. Cronbach's alpha level for involvement was .72, for positive parenting .74, poor monitoring/supervision was .66, corporal punishment was .40. Due to low internal reliability, the Other Discipline Practices subscale was not retained for further analysis.

Mothers also completed the Preschool Parenting Measure (Sessa, Avenevoli, Steinberg, & Morris, 2001) to assess other parenting behaviors such as Positive Affect (e.g., "when my child and I play together, we laugh a lot), Maternal Hostility (e.g., "I yell at my child at least once a day"), Structure (e.g., "I 'play it by ear' with my child, rather than keeping to any schedule or routine"), and Maternal Responsiveness (e.g., "I make my child feel that what she does is important"). Cronbach's alpha levels for Positive Affect, Hostility, Structure, and Responsiveness were .73, .70, .58, and .65, respectively.

Child Measures

Family Drawings

The current study assesses child participant's attachment security representations via family drawings using guidelines developed by Fury, Carlson, and Sroufe (1997). These guidelines specify observable signs found in the drawings to rate them on eight, seven-point theoretically derived scales (Fury et al., 1997). Children were given a plain white sheet of paper and eight colored pencils with which to draw, and were asked by the research assistant to draw a picture of their family. No further instruction was given. After the children indicated that they had completed their drawing task, for which they were not given a time limit, the research assistant asked them to describe their drawings by asking who they had drawn, where they were, and what they were doing. The research assistant recorded all of the children's answers.

Fury et al.'s (1997) guidelines were compiled into a manual that was used in the current study to code the drawings (Dallaire et al., 2012). Each drawing was coded independently by two undergraduate research assistants who did not assist with the child's participation. Coders were trained and rated pilot drawings until coding reliability was reached. All drawings were discussed by the two independent raters, differences in ratings explored, and when coder

agreement was achieved, this final rating was used in analysis. The drawings were coded on eight, seven-point rating scales: Creativity and Vitality, Family Pride and Happiness, Vulnerability, Emotional Distance and Isolation, Tension and Anger, Role Reversal, Bizarreness and Dissociation, and Global Pathology (Fury et al., 1997). Figures 1 and 2 provide examples of drawings and how they were rated.

Figure 1. This drawing scored a 5 in Family Pride/Happiness, and a 5.5 in Role Reversal.

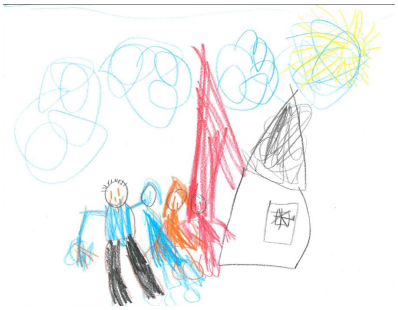

Figure 2. This drawing scored a 6 on Creativity/Vitality and a 5 on Tension/Anger.

Puppet Interview

Research assistants used two hand puppets to ask the child questions about their mother with the Child Puppet Interview-Parent Scales (CPI-P; Sessa et al., 2001). This measure consisted of seventeen items to which the child could answer verbally or by pointing to the puppet to indicate if the maternal behavior occurred, did not occur, or occurred sometimes (1, 2, or 3). The research assistant would use the puppet characters to make the statements, and then ask the child which puppet was more like them. This measure assessed children's perceptions of maternal hostility (e.g., "my mom hits me" and "my mom does not hit me"), warmth and responsiveness (e.g., "my mom lets me sit on her lap" and "my mom does not let me sit on her lap"), and structure (e.g., "I go to bed whenever I want" and "I go to bed when my mom tells me

to go to bed"). The statements were reiterated if the child did not respond, or if the child's response was unclear. Cronbach's alpha levels for child-reported maternal warmth and structure scales were .54 and .37, respectively. The hostility items did not demonstrate high internal reliability. When the items "my mom gets mad at me a little/a lot," "my mom does/does not make me cry" and "my mom does/does not like having me around" were removed from the child-reported Maternal Hostility scale, there was a Cronbach's alpha level of .43.

Results

Plan of Analysis. The current study used almost exclusively correlational analyses. First, multiple Pearson correlations were run to assess the relationship between family drawing subscale ratings (e.g., creativity/vitality) and children's age. An independent samples t-test was conducted to discern the relationship between children's gender and family drawing subscale ratings. Partial correlations between the parenting measures and children's family drawing ratings were then computed controlling for child age. Follow-up partial correlations controlling for age examined significant relations separately for boys and girls.

Differences by Child Gender and Age. Descriptive data, including means and standard deviations for all variables used in the current study, are presented by child age and gender in Table 2. An ANOVA assessed between and within-group differences in gender and age regarding family drawing variable ratings and measures of maternal behaviors. T-tests showed that mother and child-reported items differed significantly by child gender. These two analyses showed differences between groups on nearly all the drawing variables, with older children and girls showing more indicators of security. Pearson product moment correlations showed that children's age in months was positively associated with a number of mother and child-reported

variables, such as indicators of security in family drawings. Therefore, child age and gender were controlled for in subsequent analyses.

Hypothesis testing (All Child Participants). The current study hypothesized that higher scores on items on the mother-reported APQ and PPM measuring maternal harshness or a lack of maternal warmth and responsiveness would be associated with drawings higher in vulnerability, emotional distance/isolation, tension/anger, bizarreness/dissociation, role reversal, and global pathology when controlling for child age (Hypothesis A). Our findings supported Hypothesis A (see Tables 4 and 5). Multiple partial correlations controlling for child age were performed that showed maternal self-reported inconsistent parenting on the APQ was significantly correlated with multiple dimensions of the family drawings when examining all child participants. Inconsistent parenting was significantly, positively associated with higher levels of emotional distance/isolation in children's family drawings, $r(109)=.208$, $p=.030$. Inconsistent parenting reported on the APQ was significantly, positively correlated with vulnerability, $r(106)=.209$, $p=0.30$, as was mother-reported corporal punishment, $r(107)=.193$, $p=.04$. Global pathology scores were significantly correlated with mother-reported inconsistent parenting when controlling for age, $r(106)=.206$, $p=.033$.

Mother-reported indicators of maternal warmth and responsive parenting behaviors were hypothesized to be correlated with higher scores of creativity/vitality and family pride/happiness, and lower scores on the other drawing dimensions when controlling for child age (Hypothesis B). A significant, negative association between mother-reported responsiveness on the PPM and ratings of family pride/happiness was reported for all children when controlling for age, $r(107)=-.216$, $p=.024$. A significant, positive correlation was found between mother-reported

responsiveness on the PPM and tension/anger ratings, $r(107)= .215$, $p=.025$. A trend was found between higher ratings of creativity/vitality and lower levels of inconsistent parenting reported on the APQ, $r(106)= -.187$, $p=.053$, for both male and female children when controlling for age. A significant, positive association was found between global pathology and positive parenting, $r(106)=.201$, $p=.037$. Most of these findings did not support Hypothesis B.

Child-reported maternal hostility on the CPI-PS was predicted to be associated with higher ratings of vulnerability, emotional distance/isolation, tension/anger, bizarreness/dissociation, role reversal, and global pathology when controlling for child age and gender and lower scores on creativity/vitality and family pride/happiness (Hypothesis C). No significant relationship was found between the maternal hostility reported on the CPI-PS and any of the drawing variables when controlling for age, potentially due to low internal reliability for this scale. Therefore, Hypothesis C was not supported by these findings.

Child-reported indicators of maternal warmth and structure were hypothesized to be associated with higher scores on creativity/vitality and family pride/happiness ratings in the children's family drawings, and lower scores on the other drawing variables, when controlling for child age (Hypothesis D). Child-reported maternal warmth was not significantly associated with creativity/vitality in children's drawings when controlling for age. Child-reported maternal warmth was not significantly associated with family pride/happiness ratings when controlling for child age. These findings do not provide support for Hypothesis D.

Hypothesis Testing (Males Only): Because the independent samples t-test and ANOVAs revealed significant differences by gender in children's family drawing ratings and mother and child-reported maternal behaviors, follow-up testing was done separately by gender.

A partial correlation controlling for child age was performed for male child participants, and yielded few significant correlations (Table 6). Role reversal was correlated with child-reported maternal structure, which contradicts Hypothesis D, $r(42)=.389$, $p=.009$. The relationship between child-reported maternal structure and male children's family drawing ratings was not in the expected direction. The relationship for female children between child-reported maternal structure and role reversal was non-significant but in the expected direction when controlling for age, which indicates that gender may mediate the relation between role reversal and maternal structure in girls. Another unexpected finding for male children was the significant, positive relationship between mother-reported positive parenting and global pathology ratings in the family drawing, $r(53)=.284$, $p=.035$. This finding was not significant for girls, although the direction of the correlation was also unexpectedly positive, which indicates that the sample of female children may have been under-powered to detect this effect. These findings do not support Hypotheses B and D.

Hypothesis Testing (Females Only): Several significant findings were reported in female children (Table 7). Child-reported maternal warmth was significantly correlated with creativity/vitality in the drawings, $r(50)=.306$, $p=.027$. Child-reported maternal warmth was also significantly, negatively correlated with vulnerability, $r(50)=-.291$, $p=.036$. Bizarreness/dissociation ratings in the family drawings were significantly, negatively correlated with child-reported maternal warmth, $r(50)=-.291$, $p=.036$. In males, the relationship between creativity/vitality and child-reported maternal warmth was non-significant but in the expected direction, which may indicate that the analyses were under-powered to detect the effect for boys. The relationships between child-reported maternal warmth and the several of the family drawing

variables were non-significant but in unexpected directions in boys' drawings when controlling for age, which indicates that gender may mediate these relationships in boys.

Mother-reported maternal responsiveness was significantly, negatively associated with family pride/happiness in female children, $r(50)=-.425$, $p=.002$. Vulnerability was significantly, positively associated with mother-reported responsiveness in female children, $r(50)=.329$, $p=.017$. Tension/anger ratings were significantly, positively associated with mother-reported maternal responsiveness, $r(50)=.382$, $p=.005$, which contradicted expectations. This relationship was non-significant for males but in the expected direction, suggesting that gender is driving this finding in boys when controlling for age. This also occured in the relationship between vulnerability and mother-reported maternal responsiveness for males. The relationship between family pride/happiness and mother-reported maternal responsiveness was also in an unexpected direction but non-significant in boys' drawings, which may indicate that the sample was under-powered to detect this effect in males. Lastly, a positive trend was observed with mother-reported maternal responsiveness and global pathology ratings in girls' drawings, $r(50)=.255$, $p=.068$. This trend was not observed for males, although the non-significant correlation was also in the unexpected direction, which suggests that the sample was under-powered to detect the effect in males.

Discussion

This study examined the relationship between child and mother-reported maternal behaviors and young children's attachment representations as assessed in the family drawing task, while controlling for child age and examining boys and girls separately. The results of the current study provide support for the association between parenting behaviors and children's

attachment representations as assessed in family drawings. Children's age clearly impacted drawing ratings. Child age was significantly, positively associated with aspects of security in children's drawings including creativity/vitality and family pride/happiness, as well as negatively associated with drawing insecurity variables, such as vulnerability and tension/anger. The finding that children's drawings become more secure as they age may reflect changing maternal behaviors and the changing parent-child relationship more broadly. Children may grow in security in their families as they grow in autonomy, which may provide an opportunity for them to view attachment figures and their families as a secure base.

The narrative portion of the family drawing task is incorporated into the coding system by Fury et al. (1997), which allows coders to interpret the drawing according to the child's expressed narrative, rather than by assuming who figures are or what activities they are engaged in. As narrative assessments of middle childhood attachment experiences have been linked with parenting styles, mother-child interactive patterns, and maladaptive parent-child relationships (Moss et al., 1998; Karavasilis et al., 2003; Leon et al., 2007; Fihrer & McMahon, 2009; Kloft et al., 2017), it was predicted that these drawings would reveal aspects of children's perceptions of their familial relationships. Our design incorporated both mother and child-reported measures for maternal behaviors, which allowed for a more in-depth examination of these behaviors and their relationship to the family drawing ratings.

It is clear that maternal behaviors impacted the family drawings examined in this study, but that those impacts changed with age and differed by child gender. The results support previous literature that found the content of children's family drawings to be related to maternal behaviors (Fihrer & McMahon, 2009; Leon et al., 2007; Kloft et al., 2017). Several significant

correlations were found between mother-reported maternal behaviors and children's family drawing ratings when controlling for age. Inconsistent parenting, maternal responsiveness, positive parenting and corporal punishment were significantly associated with multiple family drawing variables when looking at the entire child sample and controlling for age, in both expected and unexpected directions.

The partial correlations run for all child participants, controlling for age, resulted in several associations that went in unexpected directions, such as the relationship between mother-reported positive parenting and global pathology in family drawings. This relationship was significant and positive for both boys and girls. Additionally, mother-reported maternal responsiveness was significantly, negatively associated with family pride/happiness, and significantly, positively associated with tension/anger ratings in all children, when controlling for age. In girls, mother-reported maternal responsiveness was significantly, positively related to vulnerability and tension/anger, with a trend for higher global pathology scores. It was significantly, negatively related to family pride/happiness for girls as well. These findings were in the same unexpected direction with boys, but were non-significant, potentially due to the sample being under-powered.

These unexpected findings may reveal that higher scores of positive parenting and responsiveness could be related to more intrusive parenting behaviors, such as unsolicited assistance from the mother or general over-controlling behaviors (Kiel & Buss, 2013). More intrusive parenting behaviors have been linked to maladjustment, which could be a possible explanation for more indicators of insecurity when scores on positive parenting and responsiveness are high (Kiel & Buss, 2013). Additionally, these results may be due to the

specific items on the scale measuring positive parenting, which may be susceptible to social desirability in responding. Mothers' responses may not accurately represent their true parenting practices, or the frequency of positive parenting behaviors may in actuality be inconsistent, which could contribute to children's feelings of insecurity.

These findings extend prior literature by examining the gender differences observed in the relationship between maternal behavior and security representations. Previous literature on family drawings has not focused on gender differences, or did not encounter them (Fury et al., 1997; Pianta et al., 1999, Procaccia et al., 2014). Girls' drawings overall presented as more secure, which reflects prior research that found girls' attachment-related narratives to be more positive, while boys' narratives were more negative and aggressive (Stadelman et al., 2007; Grych et al., 2002). Girls' drawings may contain more indicators of security due to a tendency to present their mothers and families overall in a more positive light than boys, as other narrative assessments have found to be the case, through the use of color, detail, positive affect, or by including a positive narration about the drawing. Gender-based differences in parenting behaviors may also influence those observed in family drawing outcome.

Boys' drawings contained more indicators of insecurity, such as tension/anger, and all the significant associations between maternal behavior and family drawing variables in boys' drawings were in unexpected directions. The positive relationship between mother-reported positive parenting and global pathology held for both boys and girls, but the significant, positive relationship between role reversal and child-reported maternal structure was only found in boys. This relation was also positive but non-significant in girls. Narrative and representational attachment assessments allow more freedom of expression than a questionnaire format, and

therefore may be more sensitive to any gender differences that exist in how children perceive events or internalize parental relationships (Pierrehumbert et al., 2009). The concept of role reversal entails children conceptualizing themselves in the caregiver role, and their parent in a dependent role. This relation is particularly unexpected and will likely require further research in order to explain.

Shortcomings of the current research suggest several avenues for future research. Firstly, family drawings were not utilized in this study in conjunction with other measures of assessing attachment in school-aged children; therefore, the results indicated here do not necessarily speak to the coding system's, or the individual item's, abilities to validly assess children's attachment security representations. Secondly, the child-reported maternal hostility scale did not have the expected level of internal reliability, which may have affected the correlational analyses performed using this scale. Additionally, the smaller sample sizes when examining the variables by child gender may have impacted the power of the analyses to find obtain statistically significant results, particularly for smaller effects.

Attachment research in early and middle childhood is less extensive than research done during infancy and other time periods. This study focused on narrative and representational assessments of attachment relationships in young school-aged young children which have been shown to be valid and reliable assessments in multiple high and low-risk populations (Pianta et al., 1999, Kloft et al., 2017). This study extended the scant literature on family drawings by examining drawing outcomes and their relation to maternal behaviors, to aid in validating them for use in clinical and nonclinical populations.

Connecting family drawing ratings and maternal behaviors furthers understanding of the relationship between these behaviors and how children conceptualize themselves in relation to their family. These types of narrative assessments in school-aged children could have clinical utility, which makes them important to examine. In settings such as family therapy, children's drawings could provide valuable insights into the perceptions and subjective emotional states of children regarding familial relationships and the family unit as a whole. In family therapy interventions for children with conduct problems, family drawings provided useful information about treatment effects and the impact of changes in parenting behaviors (Kloft et al., 2017). Family drawings would be easy for clinicians to administer and score, and could shed light onto the experiences that children have internalized, their emotional states, and their perceptions in stages of development and contexts where direct interviews are not appropriate or useful. This task has even been modified in interventions to involve the whole family unit, with clinically useful results (Kloft et al., 2017).

What children experience and internalize about their family contexts and dynamics in early and middle childhood can be critical and have impacts that reach across the lifespan. Thus, research into valid, accessible measures of the representational aspects of attachment security appropriate for children in this stage of development is still an existing need. Future research should focus on using family drawings in conjunction with other validated assessments of attachment, in order to continue to validate this measure for use in different clinical and nonclinical populations. The relation between maternal behaviors and children's internal representations of some of their most fundamental and influential relationships and experiences

as part of their family unit should continue to be explored as the nature of these associations unfold in research.

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Table 1

Mother (N=119) and Child (N=119) Participant Demographics

Variable	N (%)
Mom Race/Ethnicity	
White	103 (86.60)
Black	2 (1.70)
Asian	6 (5.10)
Native American	2 (1.70)
Other	6 (5.10)
Mom Hispanic	5 (4.20)
Child Hispanic	9 (7.60)
Child Race/Ethnicity	
White	98 (83.10)
Black	2 (1.70)
Asian	5 (4.20)
Other	13 (10.90)
Mom Marital Status	
Single	4 (3.40)
Married	106 (89.10)
Divorced	6 (5.0)
Other	3 (2.50)
Mom Education	
Some College	12 (10.10)
College Graduate	36 (30.30)
Completed Trade/Technical School	2 (1.70)
Some education after college	8 (6.70)
Masters Degree	48 (40.70)
Doctorate Degree	11 (9.30)
Child Gender	
Male	63 (52.90)
Female	56 (47.10)
Child Age in Years	
4	41 (34.50)
5	39 (32.80)
6	39 (32.80)

Table 2

Family Drawing Characteristics

Variable	N (%)
Mom Present	
Yes	97 (81.50)
No	9 (7.60)
N/A	5 (4.20)
Child Present	
Yes	94 (79)
No	14 (11.80)
N/A	5 (4.20)
Mom Smiling	
Yes	76 (63.90)
No	18 (15.10)
N/A	18 (15.10)
Child Smiling	
Yes	71 (59.70)
No	19 (16)
N/A	21 (17.60)

Table 3

Family Drawing Ratings

Variable	*N*	*Min*	*Max*	*M*	*SD*
No. of colors used	110	1.00	10.00	4.090	2.849
Creativity/Vitality	110	1.00	6.00	3.445	1.426
Family Pride/Happiness	110	1.00	6.00	3.800	1.526
Vulnerability	110	2.00	7.00	4.686	1.302
Emotional Distance/Isolation	110	2.00	7.00	4.318	1.404
Tension/Anger	110	1.50	7.00	4.122	1.265
Bizarreness/Dissociation	110	1.00	7.00	3.863	1.374
Role Reversal	91	1.00	6.00	3.560	1.299
Global Pathology	110	2.00	7.00	4.122	1.283

Table 4

Child Age and Gender Means and Standard Deviations for Mother and Child-Reported Measures

Variables		Age 4 (male, n = 21)	Age 4 (female, n = 20)	Age 5 (male, n = 18)	Age 5 (female, n = 21)	Age 6 (male, n = 24)	Age 6 (female, n = 15)
Mother-Reported (APQ)		*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
	Corporal Punishment	6.80 (1.53)	6.20 (2.04)	6.61 (1.68)	6.09 (1.54)	6.54 (1.44)	7.06 (1.62)
	Inconsistent Parenting	13.90 (2.53)	12.20 (3.30)	13.61 (3.83)	12.52 (2.92)	12.85 (0.59)	12.93 (2.21)
	Positive Parenting	25.95 (2.39)	12.52 (2.92)	25.72 (2.53)	25.71 (2.55)	26.08 (2.35)	25.13 (2.35)
	Parental Involvement	37.07 (4.92)	39.58 (2.31)	39.35 (3.88)	38.05 (3.85)	39.36 (3.40)	37.53 (3.33)
Mother-Reported (PPM)							
	Maternal Responsiveness	4.52 (.81)	4.65 (1.08)	4.83 (.85)	4.42 (.81)	4.75 (.98)	5.00 (1.73)
	Maternal Hostility	14.92 (2.40)	16.15 (2.43)	15.66 (2.61)	16.00 (3.24)	15.33 (2.25)	15.66 (2.31)
	Positive Affect	5.33 (1.11)	5.31 (1.49)	6.05 (1.73)	5.80 (1.83)	5.62 (1.24)	6.33 (1.75)
	Structure	10.45 (2.39)	10.60 (2.37)	10.38 (2.14)	11.00 (3.00)	10.91 (2.55)	10.90 (2.23)
Child-Reported (CPI-PS)							
	Maternal Responsiveness & Warmth	11.31 (2.08)	9.90 (1.88)	11.55 (1.42)	10.80 (2.46)	10.91 (1.50)	10.60 (1.54)

	Maternal Structure	11.21 (1.87)	11.78 (1.75)	11.22 (1.35)	11.19 (1.88)	11.45 (1.64)	11.66 (1.95)
	Maternal Hostility	13.33 (1.53)	13.47 (1.26)	12.88 (1.93)	13.42 (2.06)	13.50 (1.86)	13.66 (.81)
Child-Reported (Family Drawing Ratings)							
	Creativity/ Vitality**	2.27 (1.04)	3.08 (1.20)	2.62 (1.07)	4.47 (1.25)	3.76 (1.37)	4.30 (1.13)
	Family Pride/Happiness**	2.33 (1.32)	3.44 (1.14)	3.06 (1.37)	4.67 (1.12)	4.23 (1.44)	4.93 (1.01)
	Emotional Distance/ Isolation**	5.38 (1.36)	4.94 (1.09)	4.81 (1.25)	3.30 (.97)	4.58 (1.28)	3.43 (1.03)
	Vulnerability**	5.97 (.65)	5.05 (.87)	4.87 (1.08)	3.82 (1.26)	4.58 (1.28)	3.80 (1.20)
	Tension/Anger**	5.33 (.97)	4.63 (.85)	4.62 (1.13)	3.30 (1.15)	3.84 (.99)	3.43 (1.03)
	Bizarreness/ Dissociation**	5.02 (1.20)	4.63 (.92)	4.21 (1.32)	3.00 (1.11)	3.52 (1.30)	2.83 (.79)
	Role Reversal**	4.45 (1.31)	3.53 (1.06)	4.12 (1.31)	3.10 (1.20)	3.34 (1.14)	3.35 (1.51)
	Global Pathology**	5.36 (1.06)	4.69 (.87)	4.53 (1.21)	3.17 (.83)	4.02 (1.08)	2.93 (.86)
**=p<.01, between-groups differences reported from an ANOVA							

Table 5

Partial Correlations Controlling for Age (Ns ranged from 75 - 108)

Variables	Creativity	Emotional Dis.	Family Pride	Vulnerability	Anger	Role Reversal	Bizarreness	Global Path.
Mother-reported								
APQ								
Corporal Punishment	-.045	.045	-.012	.193	.004	.023	.110	.114
Inconsistent Parenting	-.187[t]	.244*	-.107	.209*	.138	.076	.112	.206*
Positive Parenting	-.007	.026	-0.49	.048	.114	-.047	.160	.201*
Parental Involvement	-.021	-.060	.100	-.049	-.008	-.046	-.029	-.050
PPM								
Maternal Responsiveness	-.146	.134	-.216*	.148	.215*	.069	.127	.115
Positive Affect	-.019	.051	-.073	.072	.095	.136	.070	.037
Maternal Hostility	-.070	-.034	-.008	-.050	-.073	.079	-.103	-.137
Structure	.071	-.037	-.026	-.045	-.098	-.111	.051	.034
Child-Reported								
CPI-PS								
Maternal Hostility	-.019	.039	-.035	-.058	.024	.119	-.039	.098
Maternal Warmth	.082	-.090	-.030	-.041	.014	-.027	-.055	-.042
Structure	-.020	-.136	.014	.035	-.032	.173	.043	.034

*=$p<.05$

[t]=trend ($p=.053$)

Table 6

Partial Correlations, Boys Only, Controlling for Age (Ns ranged from 42-54)

Variables	Creativity	Family Pride	Vulnerability	Emotional Dis.	Anger	Role Reversal	Bizarreness	Global Path.
Mother-reported								
APQ								
Corporal Punishment	.107	.004	.164	.044	-.024	-.036	.081	.121
Inconsistent Parenting	-.177	.021	.204	.228	.049	.061	.059	.171
Positive Parenting	.001	-.104	.097	.038	.190	-.072	.207	.284*
Parental Involvement	.040	.103	-.137	-.038	-.026	-.051	-.038	-.123
PPM								
Maternal Responsiveness	-.039	-.054	-.071	.061	.057	.079	.067	.006
Positive Affect	.078	-.015	.057	.039	.210	.178	.114	.031
Maternal Hostility	-.107	-.063	-.162	-.046	.005	.145	-.089	-.156
Structure	.041	-.050	-.032	-.068	-.141	-.102	.006	.042
Child-Reported								
CPI-PS								
Maternal Hostility	-.155	-.061	-.089	.095	.104	.097	-.032	.115
Maternal Warmth	.045	.024	.073	-.091	.017	-.153	.035	-.082
Structure	-.146	-.117	.051	-.057	.015	.389**	.051	.130

*=p<.05
**=p<.01

Table 7

Partial Correlations, Girls Only, Controlling for Age (Ns ranged from 34-53)

Variables	Creativity	Family Pride	Vulnerability	Emotional Dis.	Anger	Role Reversal	Bizarreness	Global Path.
Mother-reported								
APQ								
Corporal Punishment	-.124	.043	.205	.025	-.013	.006	.142	.111
Inconsistent Parenting	-.056	-.087	.087	.151	.082	-.018	.059	.103
Positive Parenting	.080	.123	-.083	-.079	-.045	-.078	.035	.028
Parental Involvement	-.088	.137	.018	-.182	-.050	-.029	-.096	-.065
PPM								
Maternal Responsiveness	-.247	-.425*	.329*	.225	.382*	.072	.207	.225ˡ
Positive Affect	-.171	-.230	.168	.156	.108	.141	.086	.183
Maternal Hostility	-.153	-.072	.133	.057	-.060	.110	-.061	-.045
Structure	.069	-.056	-.024	.032	-.031	-.102	.149	.034
Child-Reported								
CPI-PS								
Maternal Hostility	.070	-.089	.032	.031	.010	.195	.012	.208
Maternal Warmth	.306*	.102	-.291*	-.236	-.141	-.041	-.291*	-.201
Structure	.017	.080	.096	-.187	-.007	.039	.101	.023

*=$p<.05$
ˡ=trend ($p=.068$)

Appendix A

Preschool Parent Measure (Sessa et al., 2001).

Question	Strongly Agree	Agree	Disagree	Strongly Disagree
When my child and I play, we laugh a lot.	**1**	**2**	**3**	**4**
I joke around with my child.	**1**	**2**	**3**	**4**
I often smile when I'm around my child.	**1**	**2**	**3**	**4**
My child and I play together on the floor.	**1**	**2**	**3**	**4**
I snap at my child when they get on my nerves.	**1**	**2**	**3**	**4**
I yell at my child at least once a day.	**1**	**2**	**3**	**4**
When they upset me, I lose my patience and punish them more severely than I really mean to.	**1**	**2**	**3**	**4**
When my child does something wrong, I sometimes threaten them.	**1**	**2**	**3**	**4**
I sometimes make fun of my child.	**1**	**2**	**3**	**4**
There is a set schedule in my house for which day of the week we do major shopping, housecleaning, yardwork, ect.	**1**	**2**	**3**	**4**

I "play it by ear" with my child, rather than keeping to any schedule or routine.	**1**	**2**	**3**	**4**
On week nights we eat dinner within 10 or 15 minutes of the same time every night.	**1**	**2**	**3**	**4**
There is a fixed routine for my child at bedtime that seldom changes.	**1**	**2**	**3**	**4**
In my child's room, each thing has its place and is put back there after use.	**1**	**2**	**3**	**4**

Appendix B

Alabama Parenting Questionnaire
(Parent Form)

Child Name: ID #

Instructions: The following are a number of statements about your family. Please rate each item as to how often it TYPICALLY occurs in your home. The possible answers are Never (1), Almost Never (2), Sometimes (3), Often (4) Always (5). PLEASE ANSWER ALL ITEMS.

1. You have a friendly talk with your child
2. You let your child know when he/she is doing a good job with something
3. You threaten to punish your child and then do not actually punish him/her.
4. You volunteer to help with special activities that your child is involved in (such as sports, boy/girl scouts, church youth groups).
5. You reward or give something extra to your child for obeying you or behaving well.
6. You play games or do other fun things your child.
7. Your child talks you out of being punished after he/she has done something wrong
8. You ask your child about his/her day in school
9. You help your child with his/her homework
10. You feel that getting your child to obey you is more trouble than it's worth.
11. You compliment your child when he/she does something well.
12. You ask your child what his/her plans are for the day.
13. You drive your child to a special activity.
14. You praise your child if he/she behaves well.
15. You hug or kiss your child when he/she does something well.
16. You talk to your child about his/her friends.
17. You let your child out of punishment early (like lift restrictions earlier than you originally said).
18. You get so busy that you forget where your child is and what he/she is doing.
19. Your child is not punished when he/she has done something wrong.
20. You attend PTA meetings, parent/teacher conferences, or other meetings at your child's school.
21. You tell your child that you like it when he/she helps out around the house.
22. You don't tell your child where you are going.

23. The punishment you give your child depends on your

mood.

24. Your child is at home without adult supervision.

25. You spank your child with your hand when he/she

has done something wrong.

26. You ignore your child when he/she is misbehaving.

27. You slap your child when he/she does something wrong.

28. You take away privileges or money from your

child as a punishment.

29. You send your child to his/her room as a punishment.

30. You hit your child with a belt, switch, or other

object when he/she has done something wrong.

31. You yell or scream at your child when he/she

has done something wrong.

32. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves.

33. You use time out (make him/her sit or stand

in a corner) as a punishment

Appendix C

Puppet Interview

So now I want to introduce you to two puppet friends of mine. This is Ollie and this is Jamie. In some ways, Ollie and Jamie are really alike – they both really like ice cream. Do you like ice cream? In some ways they are really different. Ollie loves pepperoni on his pizza – Jamie doesn't, Which is more like you? You can point or say. You can even use your own puppet to tell me. (hand child extra puppet).

Gently probe with "Which one of us is more like you?" Remember to validate each response after the child gives it!

1 = agreement with first statement, 2 = both or sometimes both, 3 = agreement with second

	OLLIE	1	2	3	JAMIE
1.	I go to bed whenever I want				I go to bed when my mom tells me to go to bed
2.	My mom does not give me special presents				My mom gives me special presents
3.	My mom spanks me when I am bad				My mom does not spank me when I am bad
4.	My mom says I do a good job				My mom does not say I do a good job
5.	My mom does not make me cry				My mom makes me cry
6.	I do not have to wash my hands before I eat				I have to wash my hands before I eat
7.	My mom hugs and kisses me a lot				My mom does not hug and kiss me a lot
8.	My mom lets me sit on her lap				My mom does not let me sit on her lap
9.	My mom likes having me around				My mom does not like having me around
10.	My mom laughs at my jokes				My mom does not laugh at my jokes
11.	My mom hits me				My mom does not hit me
12.	My mom gets mad at me a little				My mom gets mad at me a lot
13.	At dinnertime my mom does not make me sit at the table				At dinnertime my mom makes me sit at the table
14.	My mom yells at me a lot				My mom yells at me a little
15.	My mom does not read to me				My mom reads to me
16.	I do not have to clean up my toys				I have to clean up my toys
17.	I have to share my toys				I do not have to share my toys